UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,062	10/31/2003	Bryan M. Cantrill	03226/330001; SUN040156	2597

32615 7590 03/08/2007		EXAMINER
OSHA LIANG L.L.P./SUN		MYINT, DENNIS Y
1221 MCKINNEY, SUITE 2800	ART UNIT	PAPER NUMBER
HOUSTON, TX 77010	2162	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/699,062	CANTRILL, BRYAN M.
	Examiner	Art Unit	
	Dennis Myint	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>02 February 2007</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-10,12-17 and 19-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-10, 12-17, and 19-24* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>31 October 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the

fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection.

Since this application is eligible for continued examination under 37 CFR 1.114,

and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the

previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on February 2, 2007 has been entered.

2.   The amendment filed on February 2, 2007 has been received and entered.

Claims 1-10, 12-17, and 19-24 are pending in this application. Claims 11 and 18

have been cancelled. Claims 1, 6, 12, 15, 19, 23, and 24 are independent claims.

Response to Arguments

Referring to Examiner's conclusion in the prior office action regarding

Applicant's declaration under 37 C.F.R § 1.131, Applicant argued that *In this*

instant case, Applicant is basing the declaration on the first alternative.

Accordingly, the Applicant must only show actual reduction to practice prior to the

effect date of the reference, i.e., May 16, 2002. (Applicant's argument, Page 9,

Second Paragraph)

In response, it is pointed out that Applicant(s) has (have) not explained

how the exhibit or evidence teaches all the limitations of the claims. Applicant

must provide satisfactory explanation on how each limitation of the claim teaches

by the exhibit. 37 CFR 1.131(b) requires that original exhibits of drawings or

records, or photocopies thereof, accompany and form part of the affidavit or

declaration or their absence satisfactorily explained. Most importantly, Applicant

should duly note MPEP 715.07 (R-3) as provided below:

715.07 [R-3] Facts and Documentary Evidence

I. GENERAL REQUIREMENTS

The essential thing to be shown under 37 CFR 1.131 is priority of invention and this may be done by any satisfactory evidence of the fact. FACTS, not conclusions, must be alleged. Evidence in the form of exhibits may accompany the affidavit or declaration.

Each exhibit relied upon should be specifically referred to in the affidavit or declaration, in terms of what it is relied upon to show. For example, the allegations of fact might be supported by submitting as evidence one or more of the following:

(A) attached sketches;
(B) attached blueprints;
(C) attached photographs;
(D) attached reproductions of notebook entries;
(E) an accompanying model;
(F) attached supporting statements by witnesses, where verbal disclosures are the evidence relied upon. Ex parte Ovshinsky, 10 USPQ2d 1075 (Bd. Pat. App. & Inter. 1989);
(G) testimony given in an interference. Where interference testimony is used, the applicant must point out which parts of the testimony are being relied on; examiners cannot be expected to search the entire interference record for the evidence. Ex parte Homan, 1905 C.D. 288 (Comm'r Pat. 1905);
(H) Disclosure documents (MPEP § 1706) may be used as documentary evidence of conception.

Exhibits and models must comply with the requirements of 37 CFR 1.91 to be entered into an application file. See also MPEP § 715.07(d).

A general allegation that the invention was completed prior to the date of the reference is not sufficient. Ex parte Saunders, 1883 C.D. 23, 23 O.G. 1224 (Comm'r Pat. 1883). **Similarly, a declaration by the inventor to the effect that his or her invention was conceived or reduced to practice prior to the reference date, *without a statement of facts demonstrating the correctness of this conclusion*, is insufficient to satisfy 37 CFR 1.131.**

37 CFR 1.131(b) requires that original exhibits of drawings or records, or photocopies thereof, accompany and form part of the affidavit or declaration or their absence satisfactorily explained.

In Ex parte Donovan, 1890 C.D. 109, 52 O.G. 309 (Comm'r Pat. 1890) the court stated If the applicant made sketches he should so state, and produce and describe them; if the sketches were made and lost, and their contents remembered, they should be reproduced and furnished in place of the originals. The same course should be pursued if the disclosure was by means of models. If neither sketches nor models are relied upon, but it is claimed that verbal disclosures, sufficiently clear to indicate definite conception of the invention, were made the witness should state as nearly as possible the language used in imparting knowledge of the invention to others.

However, when reviewing a 37 CFR 1.131 affidavit or declaration, the examiner must consider all of the evidence presented in its entirety, including the affidavits or declarations and all accompanying exhibits, records and "notes." An accompanying exhibit need not support all claimed limitations, provided that any missing limitation is supported by the declaration itself. Ex parte Ovshinsky, 10 USPQ2d 1075 (Bd. Pat. App. & Inter. 1989).

The affidavit or declaration and exhibits must clearly explain which facts or data applicant is relying on to show completion of his or her invention prior to the particular date. Vague and general statements in broad terms about what the exhibits describe along with a general assertion that the exhibits describe a reduction to practice "amounts essentially to mere pleading, unsupported by proof or a showing of facts" and, thus, does not satisfy the requirements of 37 CFR 1.131(b). In re Borkowski, 505 F.2d 713, 184 USPQ 29 (CCPA 1974). Applicant must give a clear explanation of the exhibits pointing out exactly what facts are established and relied on by applicant. 505 F.2d at 718-19, 184 USPQ at 33. See also In re Harry, 333 F.2d 920, 142 USPQ 164 (CCPA 1964) (Affidavit "asserts that facts exist but does not tell what they are or when they occurred.").

As such, Applicant has not clearly demonstrated/provided how each limitation of the claims would be supported by which particular part/section/item of the exhibit. The affidavit is not considered as to the merits because Applicant did not provide substantial evidence wherein limitations of the claims of the application are mapped to the submitted declaration/exhibit. Therefore, Applicant's declaration under is **ineffective.**

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

4.   Claim 1-4, 6, 10, 16, 17, 21, and 22 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Tang et al. (U.S. Patent Application Publication

Number 2003/0217130) in view of Coss et al. (U.S. Patent Application

Publication Number 2003/0233380).

Referring to claim 1, Tang et al. is directed to a method for obtaining data

from a kernel (Tang et al., Figure 2 and Paragraph 0037, i.e. " Kernel-level

module 302 executes to compile the desired information to be communicated to

user-space 301, thus avoiding the need to store network information that is not

needed/desired to user-space 301."). However, Tang et al. does not explicitly

disclose storing the data in a data set in an aggregation buffer using an

aggregation an aggregation function.

On the other hand, Coss et al. teaches a method and system for user-

defined aggregate functions in database systems without native support, wherein

data is stored in a data set (Coss et al., Figure 3B "ADDR" 312 and

"INTERMEDIATE RESULT" 310) in an aggregation buffer (Paragraph 0025, i.e.

"keeping the intermediate results generated in each·iteration of the loop in a

variable stored *in memory that is external to the database."*) using an

aggregation function (Coss et al., Paragraph 0023, i.e. "two new functions:

ComputeAggregate and GetAggregateResults).

At the time the invention was made, it would have been obvious to a

person ordinary skill in the art to combine the method Tang et al. with the feature

of using a aggregate function and aggregate buffer as taught by Coss et al. so

that, in the combined system the data set would be stored in an aggregation

buffer using an aggregation an aggregation function. One would have been

motivated to do so in order to provided "user-defined aggregation function for use

with database systems that do not use recursive programming techniques" (Coss

et al, Paragraph 0010).

Referring to claim 2, Tang et al. in view of Coss et al. is directed to the

method of claim 1, wherein the data set comprises a key component (Coss et al.,

Paragraph 0028, "unique identifier" and Figure 3A.i.e. "), an aggregation identifier

component (Coss et al., Paragraph 0024 "identifier element" and Paragraph"

0028, "a counter portion". Note that Coss et al. uses both as the identifier

element and sequential counter to uniquely identify the intermediate result

(value) along with the pointer portion.), and a value component. (Coss et al.,

Paragraph 0027, i.e., "immediate result"). Particularly note what Coss et al.

discloses on how said unique identifier (key component) is generated in

Paragraph 0028.

Referring to claim 3, Tang et al. in view of Coss et al. is directed to the method of claim 1, wherein obtaining data comprises:

obtaining an expression (Coss et al., Paragraph 0024, "addition" and "multiplication"), a new value (Coss et al. Paragraph 0025, i.e. "intermediate results"), and an aggregation identifier (Coss et al., Paragraph 0024 "identifier element" and Paragraph" 0028, "a counter portion". Note that Coss et al. uses both the identifier element and sequential counter to uniquely identify the intermediate result (value) along with the pointer portion.) , and

generating a key using the expression (Coss et al., Paragraph 0024, "addition" and "multiplication") and the aggregation identifier (Coss et al., Paragraph 0024 "identifier element" and Paragraph" 0028, "a counter portion".). Note that the expression (such as "addition", "multiplication", Coss Paragraph 0024) identifies which aggregation function to use, which in turn produces a unique identifier, which is associated with intermediate result (Coss Paragraph 0027-0028).

As per claim 4, Tang et al. in view of Coss et al. is directed to the method of claim 3, wherein storing the data set comprises:

storing the key in the key component (Coss et al., Paragraph 0027, i.e., "Here, the identifier returned to the DBMS is stored in such a sequential matter, such as in a table, ..."),

storing the aggregation identifier in the aggregation identifier component (Coss et al., Paragraph 0024 "identifier element" and Paragraph" 0028, "a counter portion".), and

updating a current value in the value component using the new value and

the aggregation function (Coss et al., Paragraph 00227, i.e. "Each time an

intermediate result is produced, it is stored...").

Referring to claim 6, Tang et al. in view of Coss et al. is directed to a

method for storing data in a data set, wherein the data set comprises a key

component (Coss et al., Paragraph 0028, "unique identifier" and Figure 3A.i.e. "),

an aggregation identifier component (Coss et al., Paragraph 0024 "identifier

element" and Paragraph" 0028, "a counter portion".), and a value component

(Coss et al., Paragraph 0027, i.e., "immediate result"),

comprising:

obtaining an expression, a new value, and an aggregation identifier (Coss

et al., Paragraph 0024-0025 and 0027-0028. Also see the part on claim 2

above.);

generating a key using the expression and the aggregation identifier (Coss

Paragraph 0027-0028); and

storing the data set in a buffer, wherein storing the data set comprises

storing the key in the key component, storing the aggregation identifier in the

aggregation identifier

component, (Coss et al., Paragraph 0024 "identifier element" and

Paragraph" 0028, "a counter portion", Coss et al., Paragraph 0027, i.e.,

"Here, the identifier returned to the DBMS is stored in such a sequential

matter, such as in a table, ...", Coss et al., Paragraph 0027, i.e.,

"Here, the identifier returned to the DBMS is stored in such a sequential

matter, such as in a table, ...", and Coss et al. Paragraph 0027-0028) and updating a current value in the value component using the new value and an aggregation function (Coss et al., Paragraph 00227, i.e. "Each time an intermediate result is produced, it is stored...").

Referring to claim 10, Tang et al. in view of Coss et al. is directed to the method of claim 6, wherein the expression comprises an n-tuple (Coss et al., Paragraph 0024, "addition" and "multiplication"). In the method of claim 2 as taught by Tang et al. in view of Coss et al, aggregation functions such as "addition" and "multiplication" (Coss et al., Paragraph 0024) would be applied to the data from the kernel-level (Tang et al., Figure 2 and Paragraph 0037). n-tuples are inherent is said data from the kernel-level because said data could comprise data from different applications or client computers.

Claim 16 and 17 are rejected on the same basis as claim 3.

Claim 21 is rejected on the same basis as claim 16.

Claim 22 is rejected on the same basis as claim 17.

5.   Claim 5, 7-9, 12, 13, 15, 20, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tang et al. in view of Coss et al. and further in view of Larson et al. (U.S. Patent Number 6578131).

Referring to claim 5, Tang et al. in view of Coss et al. as applied to claim 4 does not explicitly disclose about using a hash table for update/search

operations. However, Larson et al. teaches a method and system for scalable

hash table wherein data is stored employing a hash table, comprising:

generating a hash key (Larson et al., Column 6 Line 40-55, i.e. "a hash

table". Note that any hash table generates a hash key);

searching for a hash bucket (Larson et al., Column 6 Line 40-55, i.e.

"lookup");

searching for a hash chain element in the hash bucket (Larson et al.,

Column 7 Line 66 through Column 7 Line 28, i.e. "hash chain");

updating the value component of the data set associated with the hash

chain element if a hash chain element corresponding to the key is found (Official

note is taken that the concept of hash table and updating data using a hash-table

search is notorious well know in the art.),

creating a new hash chain element if the hash chain element

corresponding to the key is not found and updating the value associated with the

new hash chain element (Official note is taken that creating new hash chain is in

a hash table is notorious well know in the art.).

At the time the invention was made, it would have been obvious to a

person of ordinary kill in the art to add the feature of employing a hash table to

update and lookup data as taught Larson et al. to the method of Tang et al. in

view of Coss et al so that, in the combined method, storing the data set further

comprises:

generating a hash key using the key (Larson et al. in view of Coss et al.,

i.e. Coss et al, Paragraph 0024-0025 and 0027-0028);

searching for a hash bucket corresponding to the key using the hash key (Larson et al. in view of Coss et al., i.e. Coss et al, Paragraph 0024-0025 and 0027-0028);

searching for a hash chain element in the hash bucket corresponding to the key; (Larson et al. in view of Coss et al., i.e. Coss et al, Paragraph 0024-0025 and 0027-0028)

updating the value component of the data set associated with the hash chain element if a hash chain element corresponding to the key is found, wherein the updating the value component comprises applying the aggregation function to the current value in the value component using the new value as input (Larson et al. in view of Coss et al. Paragraph 00227, i.e. "Each time an intermediate result is produced, it is stored...");

creating a new hash chain element if the hash chain element corresponding to the key is not found, wherein creating a new hash chain element comprises associating a new

data set with the new hash chain element, storing the key in a key component of the new data set, storing the aggregation identifier in an aggregation identifier component of the new data set, and storing an initial value in a value component of the new data set (Larson et al. in view of Coss et al, Paragraph 0024-0025 and 0027-0028); and

updating the value component associated with the new hash chain

element, wherein the updating the value component associated with the new

hash chain element comprises

applying the aggregation function to the initial value using the new

value as input (Larson et al. in view of Coss et al, Paragraph 00227, i.e.

"Each time an intermediate result is produced, it is stored...").

One would have been motivated to add the feature of employing hash

table for data update and lookup as taught by Larson et al. because "hashing is

often used to provide fast lookup of items in a cache" (Larson et al., Column 1

Line 22-28).

Claim 7 is rejected on the same basis as claim 5.

Referring to claim 8, Tang et al. in view of Coss et al. and further in view of

Larson et al. is directed to the method of claim 7, wherein the hash chain element

is associated with the data set using a pointer (Larson et al. Column 7 Line 66

through Column 7 Line 13, i.e. "Each entry in the hash table consists of nothing

more than a pointer to a linked list containing all items hashing to that address.

The linked list, or "hash chain", can either be embedded or separate. In the first

case, the pointer field needed for the hash chain is embedded in the items

themselves,.."). Therefore, in the combined method of Tang et al. in view of

Coss et al. and further in view of Larson et al., said pointer would be pointing to

the data set.

Referring to claim 9, Tang et al. in view of Coss et al. and further in view of Larson et al. is directed to the method of claim 7, wherein the new hash chain element is associated with the new data set using a pointer. As applied in claim 8 above, in the combined method of Tang et al. in view of Coss et al. and further in view of Larson et al., the new hash chain element is associated with the new data set using a pointer.

Claim 12 is rejected on the same basis as claim 7.

Claim 13 is rejected on the same basis as 5.

Claim 15 is rejected on the same basis as claim 9.

Claim 20 is rejected on the same basis as claim 15.

Claim 24 is rejected on the same basis as claim 5.

6.   Claim 14, 19, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tang et al. in view of Coss et al. and further in view of Larson et al. and further in view of Barnett et al. (U.S. Patent Application Publication Number 2003/0159132).

Referring to claim 14, Tang et al. in view of Coss et al. and further in view of Larson as applied to claim 5 above does not explicitly recite the use of dictionaries. However, using data dictionaries a long with hash tables is well known in the art. For instance, Barnett et al. teaches a method and system for

conformance checking, wherein data dictionaries are used along with hash tables

(Barnett et al. Paragraph 0028 and 0040).

At the time the invention was made, it would have been obvious to a

person of ordinary skill in the art to add the feature of using data dictionaries

along with hash tables as taught by Barnett et al. to the method and system of

Tang et al. in view of Coss et al. and further in view of Larson et al. so that in

resultant method and system would be directed to the method claim 12, wherein

obtaining the aggregation identifier matching the value of the aggregation

identifier comprises search at least one selected from the group consisting of a

user-level dictionary and a kernel level dictionary. Note that Tang et al. teaches

data from user-level and kernel-level.

Claim 19 is rejected on the same basis as claim 14. Note that Tang et al.

teaches both user-level and kernel-level data.

Claim 23 is rejected on the same basis claim 14.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Myint whose telephone number is (571) 272-5629. The examiner can normally be reached on 8:30AM-5:30PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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